A wireless lock controller (Wi-Lock) is a locking mechanism that is embedded in an existing door configuration. The main controller of the Wi-Lock is set in the area where the door knob is typically located. The main controller has a keypad with numeric buttons where a user can enter a code to disengage a lock. The user can also use the keypad to reset and set the code. The controller has a compartment that holds a battery and mechanisms that monitor the power level. The controller has a wireless receiver that receives messages from a centralized control station that can control remotely all locks on the university campus. The controller also has a transmitter that sends messages to the control station with regards to status of the lock (i.e. locked, unlocked, disabled, and charged). The main controller has three LEDs which are illuminated based on the status of the lock previously mentioned. The transmitter also sends lock or unlock signals to the actual locking mechanism. For our benefit the locking mechanism is considered to be a separate wireless component but still part of the software system (*Hint: not an actor*).

WiLockController

UserCode

checkCode()
checkCharge()
lock()
unlock()
disable()
Enable()

KeypadController

UserCode

captureUserCode()
transmitCode()

BatteryModule

DoorLockMech

lock()
unlock()

KeyPadObjects

WiTransmitter

sendMessage()

WirelessReceiver

receiveMessage()

LEDMgr

setLocked()
setDisabled()
setCharged()

ButtonController

CaptureBPresses...
CreateMessage()

Message

lock
unlock
lockmalfunction

LED

3

lit_YN

set()
disable()

UnlockedLED

DisabledLED

ChargedLED